

### **REMARKS**

Pursuant to the present Preliminary Amendment, claims 31 and 32 have been amended. Claims 31, 32 and 45-57 are pending in the present application. No new matter has been introduced by way of the present amendment. Reconsideration of the present application is respectfully requested.

In the Final Office Action (dated June 8, 2006), claims 49 and 55 were allowed.

In the Final Office Action, claims 31-32, 45-46 and 51-52 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Admitted Prior Art (APA) in view of Frigo (U.S. Patent No. 5,232,869). Claims 47 and 53 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Admitted Prior Art in view of Frigo and further in view of Freemantle (C&EN) and Blomgren (U.S. Patent No. 5,188,914). Claims 48 and 54 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Admitted Prior Art in view of Frigo and Freemantle and further in view of Jones (U.S. Patent No. 4,839,249). Claims 50 and 56 were rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Admitted Prior Art in view of Frigo, Freemantle and Abdul-Sada (WO 95/21872). Claim 57 was rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Admitted Prior Art in view of Frigo, Freemantle and Ballingall (U.S. Patent No. 4,911,101). Applicant respectfully traverses the Examiner's rejections.

#### **I. Legal Standards**

As the Examiner well knows, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify

the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. Moreover, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); M.P.E.P. § 2143.03.

With respect to alleged obviousness, there must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. The consistent criterion for determining obviousness is whether the prior art would have suggested to one of ordinary skill in the art that the process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art. Both the suggestion and the expectation of success must be founded in the prior art, not in the Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988); M.P.E.P. § 2142.

## II. Argument

In the previous appeal of the present application, the Board of Appeals stated:

“As correctly argued by appellant (Brief, page 4), the admitted prior art discloses ‘conventional CVD solvents’ which are usually organic liquids with a vapor pressure of greater than about 1 torr at room temperature (specification, page 3, ll. 18-20), not ionic liquids as defined in the specification (e.g., page 4, ll. 22-29). Appellant also correctly argues that there is ‘not even a hint’ in Freemantle that an ionic liquid source should be used in vapor deposition (Brief, page 4).

Decision on Appeal, page 4.

In addition to the prior art that was the subject of the previous appeal, the Examiner now relies upon Frigo to support the current rejections.

Pursuant to the present amendment, independent claims 31 and 32 have been amended to recite an ionic liquid source that contains no solid portion, as mentioned by the Examiner (Final Office Action, p. 9). Of course, in making the present amendment, it is not implied or suggested that the ionic liquid cannot contain any solids whatsoever, as any such liquid may have contaminant levels of solid particles despite all efforts to avoid such contamination. Thus, the present amendment should be understood to distinguish the presently claimed invention from prior art, like Frigo, wherein a solid portion, e.g., the solid metal precursor, is the source of the ionic liquid.

It is respectfully submitted that, as amended, independent claims 31 and 32, as well as all claims depending therefrom, are in condition for immediate allowance. More specifically, it is respectfully submitted that Frigo teaches away from the inventions set forth in the currently pending claims. Frigo states that the invention disclosed therein comprises contacting a carrier gas and a solid metal precursor while the precursor is in contact with a liquid having a relatively

low vapor pressure in which the metal precursor is at least partially soluble. Col. 3, ll. 39-43. Frigo specifically notes that the “amount of liquid is sufficient to dissolve only a portion of the solid and it is **required** that the metal precursor **remain in part as a solid.**” Col. 4, ll. 2-4 (emphasis added).

Thus, contrary to suggesting the subject matter set forth in the pending claims, which includes an ionic liquid source that contains no solid portion, Frigo specifically teaches that the invention disclosed therein **REQUIRES** that the metal precursor be a **solid** and **remain a solid** (at least in part) during the process.

Applicant respectfully submits that amended independent claims 31 and 32 are allowable for several reasons. First, there is no motivation to combine the references in the manner suggested by the Examiner. Frigo expressly teaches that a solid metal precursor must be used. It is simply not credible to contend that one skilled in the art, when reading Frigo, would be motivated to use an ionic liquid source that contains no solid portion when Frigo expressly states that a solid metal precursor is required.

Second, even if the references were combined, it is unclear that such a combination of the references would work for its intended purpose. Frigo is very clear that a solid metal precursor is required. Thus, based upon the express teaching of Frigo, there is considerable doubt that the system and methodology disclosed in Frigo would work for the intended purpose if an ionic liquid source that contains no solid portion was employed. What is certain is that Frigo states that a solid metal precursor is required for his invention.

A recent Federal Circuit case makes it crystal clear that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation

to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35. It is respectfully submitted that any attempt to assert that the inventions defined by the pending claims would have been obvious in view of the prior art of record would necessarily involve an improper use of hindsight using Applicant's disclosure as a roadmap.

In view of the foregoing, it is respectfully submitted that all pending claims are in condition for allowance. The Examiner is invited to contact the undersigned attorney at (713) 934-4055 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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